

(19)



JAPANESE PATENT OFFICE

PATENT ABSTRACTS OF JAPAN

(11) Publication number: 2000223012 A

(43) Date of publication of application: 11.08.2000

(51) Int. Cl. H01J 9/02

B01J 19/08, C01B 31/02, H01J 1/304

(21) Application number: 11059142

(22) Date of filing: 31.01.1999

(71) Applicant: FUTABA CORP

(72) Inventor: TAKIGAWA HIROSHI
SAKAKIBARA KENJU
ITO SHIGEO

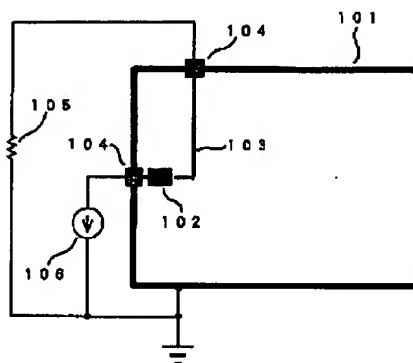
(54) ELECTRON EMITTING SOURCE AND MANUFACTURE THEREOF

COPYRIGHT: (C)2000,JPO

(57) Abstract:

PROBLEM TO BE SOLVED: To provide an easy manufacturing method of an electron emitting source.

SOLUTION: A negative electrode 102 is locally heated by carrying an arc electric current of DC 100 A and arc-discharging for a second in a chamber 101 of an He atmosphere under a pressure of 1 Pa. Negative electrode material for forming the negative electrode 102 is scattered and particles with a lot of carbon nanotubes formed on the surface are generated. The particles are collected and used as an emitter of the electron emitting source.





(19)



JAPANESE PATENT OFFICE

PATENT ABSTRACTS OF JAPAN

(11) Publication number: 20002230

(43) Date of publication of application: 11.08.2

(51) Int. Cl. H01J 9/02

B01J 19/08, C01B 31/02, H01J 1/304

(21) Application number: 11059142

(22) Date of filing: 31.01.1999

(71) Applicant: FUTABA CORP

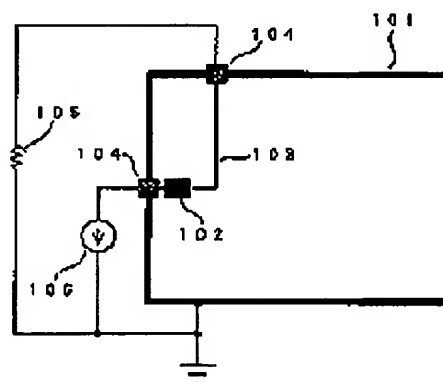
(72) Inventor: TAKIGAWA HIROSHI
SAKAKIBARA KENJU
ITO SHIGEO(54) ELECTRON EMITTING SOURCE AND
MANUFACTURE THEREOF

COPYRIGHT: (C)2000,JPO

(57) Abstract:

PROBLEM TO BE SOLVED: To provide an easy manufacturing method of an electron emitting source.

SOLUTION: A negative electrode 102 is locally heated by carrying an arc electric current of DC 100 A and arc-discharging for a second in a chamber 101 of an He atmosphere under a pressure of 1 Pa. Negative electrode material for forming the negative electrode 102 is scattered and particles with a lot of carbon nanotubes formed on the surface are generated. The particles are collected and used as an emitter of the electron emitting source.





derPatent

DELPHION**RESEARCH****PRODUCTS****INSIDE DELPHION**[Log Out](#) [Work Files](#) [Saved Searches](#)[My Account](#)Search: [Quick/Number](#) [Boolean](#) [Advanced](#) [Der](#)

The Delphion Integrated View

Get Now: ☒ [PDF](#) | [More choices...](#)Tools: [Add to Work File:](#) [Create new Work I](#)View: [INPADOC](#) | Jump to: [Top](#) [Go to: Derwent](#)[Email](#)

🔍 Title: **JP2000223012A2: ELECTRON EMITTING SOURCE AND MANUFACTURE THEREOF**

🔍 Derwent Title: Manufacture of source for electron emission, involves heating particle formation material at predetermined atmosphere and adhering the formed particle to a substrate [\[Derwent Record\]](#)

🔍 Country: JP Japan

🔍 Kind: A2 Document Laid open to Public inspection i

🔍 Inventor: TAKIGAWA HIROSHI;
SAKAKIBARA KENJU;
ITO SHIGEO;

🔍 Assignee: FUTABA CORP
[News, Profiles, Stocks and More about this company](#)

🔍 Published / Filed: 2000-08-11 / 1999-01-31

🔍 Application Number: JP1999000059142

🔍 IPC Code: [H01J 9/02](#); [B01J 19/08](#); [C01B 31/02](#); [H01J 1/304](#);

🔍 Priority Number: 1999-01-31 JP1999000059142


🔍 Abstract: PROBLEM TO BE SOLVED: To provide an easy manufacturing method of an electron emitting source.

SOLUTION: A negative electrode 102 is locally heated by carrying an arc electric current of DC 100 A and arc-discharging for a second in a chamber 101 of an He atmosphere under a pressure of 1 Pa. Negative electrode material for forming the negative electrode 102 is scattered and particles with a lot of carbon nanotubes formed on the surface are generated. The particles are collected and used as an emitter of the electron emitting source.

COPYRIGHT: (C)2000,JPO

🔍 Family: None

🔍 Forward References: [Go to Result Set: Forward references \(1\)](#)

PDF	Patent	Pub.Date	Inventor	Assignee	Title
	US6848962	2005-02-01	Kitamura; Shin	Canon Kabushiki Kaisha	Electron-emitting device, electron image-forming apparatus, and method of producing electron-emitting device

🔍 Other Abstract Info: [CHEMABS 133\(12\)171172B](#) [CHEMABS 133\(12\)171172B](#) [DERABS C2000-596841](#) [DE C2000-596841](#)



Nominate this for the Gall



Copyright © 1997-2005 The Thor

[Subscriptions](#) | [Web Seminars](#) | [Privacy](#) | [Terms & Conditions](#) | [Site Map](#) | [Contact U](#)